Title (en)

ALPHA-LIPOIC ACID NANOPARTICLE AND METHOD FOR PRODUCING THE SAME

Title (de)

ALPHA-LIPONSÄURENANOPARTIKEL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

NANOPARTICULE D'ACIDE ALPHA-LIPOÏQUE ET SON PROCÉDÉ DE FABRICATION

Publication

EP 2241314 A1 20101020 (EN)

Application

EP 08863352 A 20081212

Priority

- JP 2008072699 W 20081212
- JP 2007324041 A 20071214

Abstract (en)

Provision of a stable ±-lipoic acid. A method for producing ±-lipoic acid nanoparticles, the method comprising the steps of: preparing an aqueous dispersion liquid containing ±-lipoic acid and a nonionic surfactant; adding a divalent metal salt into the aqueous dispersion liquid, wherein the divalent metal salt is a divalent metal halide, a divalent metal acetate or a divalent metal gluconate; and adding an alkali metal carbonate or an alkali metal phosphate into the aqueous dispersion liquid which has been added with the divalent metal salt, thereby forming ±-lipoic acid nanoparticles.

IPC 8 full level

A61K 31/385 (2006.01); **A61K 47/02** (2006.01); **A61K 47/34** (2006.01); **A61P 1/02** (2006.01); **A61P 17/00** (2006.01); **A61P 39/06** (2006.01); **B82Y 5/00** (2011.01); **C07D 339/04** (2006.01)

CPC (source: EP US)

A61K 9/0014 (2013.01 - EP US); **A61K 9/0019** (2013.01 - EP US); **A61K 9/0095** (2013.01 - EP US); **A61K 9/2018** (2013.01 - EP US); **A61K 9/5115** (2013.01 - EP US); **A61P 1/02** (2017.12 - EP); **A61P 17/00** (2017.12 - EP); **A61P 17/02** (2017.12 - EP); **A61P 39/06** (2017.12 - EP); **B82Y 5/00** (2013.01 - EP US); **C07D 339/04** (2013.01 - EP US); A61K 9/14 (2013.01 - EP US)

Cited by

EP3235493A4; EP3421131A1; ITMI20111452A1; EP3795151A4; US10729661B2; US12083521B2; WO2013018008A1; WO2019002622A1; WO2019068846A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2241314 A1 20101020; **EP 2241314 A4 20120808**; **EP 2241314 B1 20130417**; CA 2707010 A1 20090625; CN 101945654 A 20110112; CN 101945654 B 20120627; JP 2011063606 A 20110331; JP 4647706 B2 20110309; JP 5547612 B2 20140716; JP WO2009078366 A1 20110428; KR 101441523 B1 20140917; KR 20100101660 A 20100917; US 2011065781 A1 20110317; US 9079874 B2 20150714; WO 2009078366 A1 20090625

DOCDB simple family (application)

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